Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Amendment of Section 97.301-305)
)
Allocation of 216-220 MHz to)
the Amateur Service.)
)
July 11, 1991)

RECEIVED
JUL 19 1991
FCC MAIL BRANCH

ORIGINAL
FILE

RM-7747

RECEIVED
JUL 19 1991

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Dear Mr. Secretary,

Please find enclosed an original and eleven copies of comments on RM-7747. Please distribute them to whomever they are to go to.

RESPECTFULLY SUBMITTED,

TIMOTHY J. STOFFEL, NS9E
263 Arborwood Ln.
Rochester, Ny. 14615
(716)-325-7500 days
(716)-647-1379 evenings

0711

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Amendment of Section 97.301-305)

The proposal I would like to make is to open a portion of the 216-220 MHz band, if allocated to the Amateur service, to the weak-signal SSB and CW users. The ARRL apparently did not consider this in submitting their proposal to the FCC.

Ideally, A 1 or 2 MHz segment, or maybe a little less spectrum should be allocated in the 218-220 MHz region of the proposed allocation. It could and should be shared with fixed packet and auxiliary services, but it would be nice if 300-500 kHz could be exclusively SSB and CW type operations. It could be in the 216-218 MHz area, but would be better in the 218-220 MHz area to minimize the impact of being close to TV channel 13. More on that later. It also would be less difficult, financially and technically, to modify existing equipment to go down only two MHz rather than four MHz.

To protect other services using this spectrum, namely the Waterway radio services on the great rivers of the Midwest, I propose that there be guard bands set up around waterways where these services are used. It should apply to any non-fixed systems whether they be weak signal, packet radio, or auxiliary services. (Non-fixed defined here as any operation not designed to communicate between two specific points on a permanent basis.)

Here's a possible suggestion: (Based on personal experience.)

Distance to waterway	Operating restrictions
0-25 miles	No operation authorized.
25-35 miles	25 watts max. power output.
35-50 miles	50 watts max. power output.
More than 50 miles	No additional restrictions.
Mobile stations	No operation authorized within 50 miles.

It would also be a good idea to impose ERP limits on fixed links to facilitate re-use of frequencies in this segment.

Now, let's look at some other good reasons why this weak signal authorization is needed.

1. The weak signal operators are the people doing most of the experimenting that is 'advancing the state of the radio art'[2] on any of the VHF bands. The circuits and techniques tested in the hamshack are the ones that appear in tomorrow's commercial and military radio equipment. Numerous examples of circuits developed over the years by hams have proven themselves over and over again in public safety, on the battlefield, in space, or even on the kitchen table. By not giving spectrum space to these people, it makes this sort of experimentation difficult. Nobody has lost more in the reallocation of 220-222 MHz than the experimenters. Their expertise will be needed to build good commercial equipment for this new segment of the VHF bands.

2. The weak signal operators are among the few people left in the Amateur service that still build a lot of their own equipment. This may not sound like a good reason, but it strongly supports the points made in #1 above.

3. Weak signal operators are among the best disciplined operators due to the weak signals they often work with. They generally show considerable discipline when it comes to using high power, avoiding interference, and keeping most of their signal going in the desired direction rather than all over. This

group of operators will often be the first ones on the air after a disaster due to their technical skill. They will also be the first ones to do tactical communications under marginal conditions due to their CW proficiency, ability to copy signals below the noise, etc.

4. There will probably not as huge an explosion of SSB/CW

on an *odd* numbered pair (eg, 146.13/.73) will move 10-kHz, up or down, creating a new *even* numbered channel. Therefore, the pair of 146.13/.73 would change to 146.12/.72 or 146.14/.74 while the pairs of 146.10/.70 and 146.16/.76 would be left unchanged.

220-225 MHz

The following band plan is currently under review by the ARRL VHF-UHF Advisory Committee.

220.00-220.05	EME (Earth-Moon-Earth)
220.05-220.06	Propagation beacons
220.06-220.10	Weak signal CW
220.10	Calling frequency
220.10-220.50	General weak signal, rag chewing and experimental communications
220.50-221.90	Experimental and control links
221.90-222.00	Weak signal guard band
222.00-222.05	EME
222.05-222.06	Propagation beacons
222.06-222.10	Weak signal CW
222.10	Calling frequency
222.10-222.30	General operation CW or SSB, etc.
222.34-223.38	Repeater inputs
223.34-223.90	Simplex and repeater outputs (local option)
223.94-224.98	Repeater outputs

The following packet radio frequency recommendations were adopted by the ARRL Board of Directors in July 1987.

1) 100-kHz-bandwidth channels:

220.55	220.85
220.65	220.95
220.75	

2) 20-kHz-bandwidth channels:

221.01	221.07
221.03	221.09
221.05	223.40 National packet simplex calling

Candidate packet simplex channels shared with FM voice simplex. Check with your local frequency coordinator prior to use. Those channels are:

223.42	223.46
223.44	223.48

Packet Footnotes

Specific VHF/UHF channels recommended above may not be available in all areas of the US.

Prior to regular packet-radio use of any VHF/UHF channel, it is advisable to check with the local frequency coordinator.

The decision as to how the available channels are to be used should be based on coordination between local packet-radio users.